GE Healthcare

Optima* CT660 FREEdom Edition

an innovation of
healthymagination

ecomagination

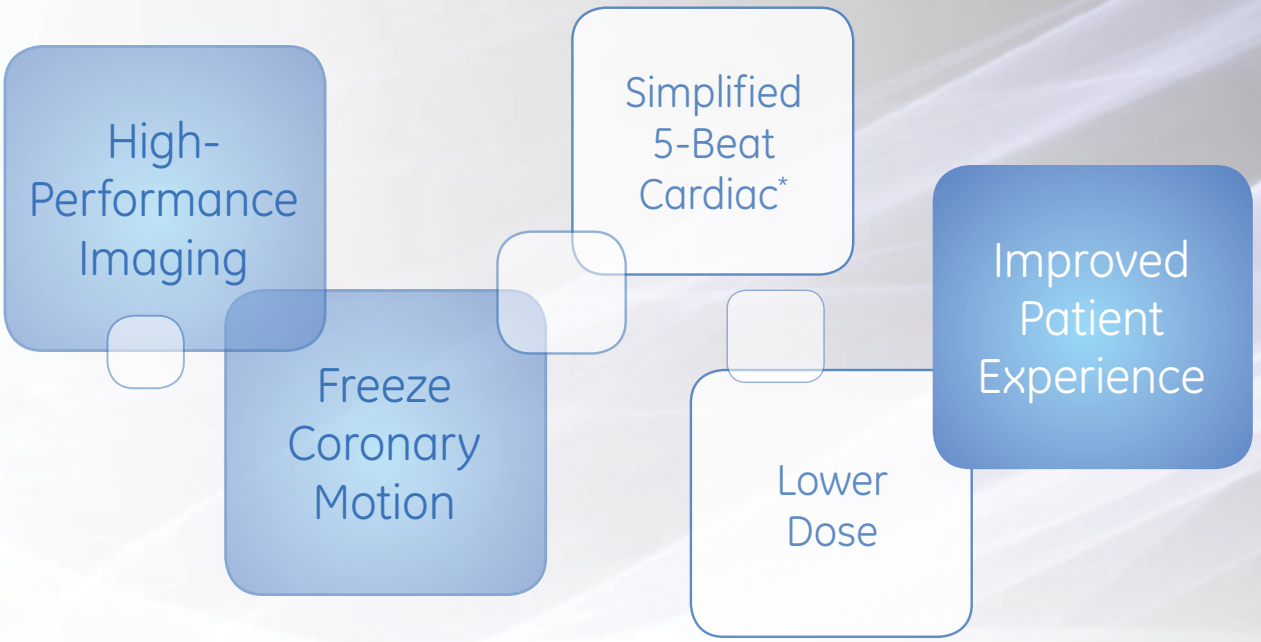
Discover the power of Optima CT660 FREEdom Edition

Exceptional, personalized patient care tailored to fit your needs.

Diagnostic power.
Workflow efficiency.
Lower dose.

The Optima CT660 FREEdom Edition brings it all together addressing the changing dynamics of today's healthcare marketplace designed to help you achieve exceptional patient care, operational excellence and financial performance.

You want the best for your patients



Hospitals and clinicians today must do more with less. Healthcare reform, market uncertainties and changes in care delivery, including the emergence of Accountable Care Organizations, are driving purchasing decisions.

Therefore, your need for quality patient care at low dose and greater productivity and affordability are more important than ever.

The Optima CT660 FREEdom Edition is a new-generation, intelligent Volume CT scanner. It combines intelligent motion correction from our Discovery* CT750 HD FREEdom Edition with the exclusive workflow capabilities of the Optima CT660 for fast, high-quality acquisitions at optimized dose.

We've simplified workflow on the Optima CT660 for quick, streamlined operation. Advanced workflow features like ED mode, auto patient positioning, and synchronized injection improve quality of care by helping your staff focus more time on patient care and comfort.

As the industry leader in innovative, clinically proven low-dose technology, we've loaded the Optima CT660 FREEdom Edition with features like ASiR*, Optidose*, and Dose Check* to help you achieve diagnostic image quality and deliver the highest quality patient care at optimized dose.

Because you want the best for your patients—Optima CT660 FREEdom Edition.

healthymagination

The Optima CT660 FREEdom Edition embodies the GE commitment to making affordable technologies and quality care available to more people in an environmentally conscious manner.

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It is among the world's most energy-efficient volume CT systems, using about 60% less energy than our previous generation scanners. With a thoughtful overnight "sleep" mode and electronic designs, it uses less energy both when operating and inactive. Its smaller size and lighter weight reduce transportation costs. And it complies with international regulations on design requirements for recycling and the prohibition of hazardous materials.

Motion FREEdom with SnapShot Freeze

Introducing SnapShot* Freeze, an intelligent motion correction breakthrough. With SnapShot Freeze, coronary motion is significantly reduced, transcending the limits of a hardware-only system.

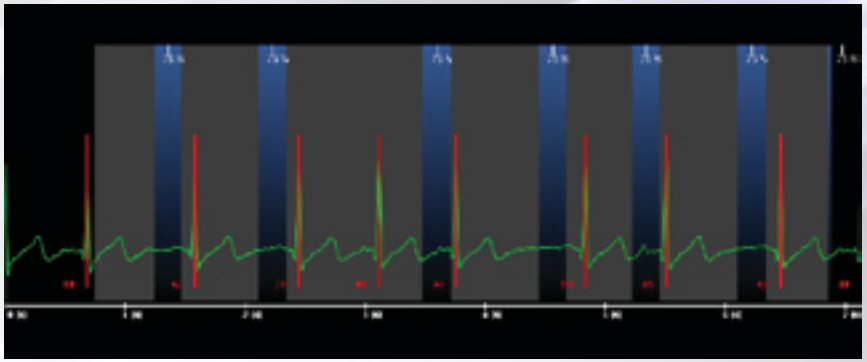
29 msec
Effective Temporal Resolution

.058 sec
Equivalent Gantry Speed

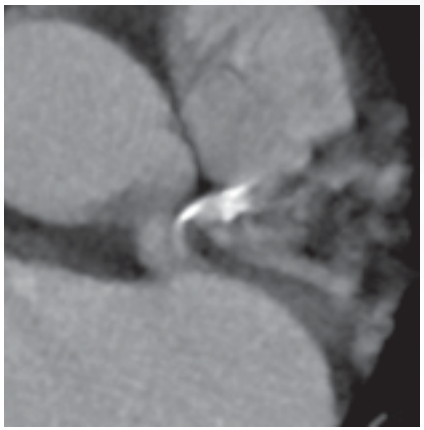
Coronary artery motion is a leading cause of non-diagnostic cardiac CTA exams, especially in patients with high heart rates.

SnapShot Freeze calculates a vessel's motion path and velocity from adjacent cardiac phases and uses that information to determine where the vessel will be at the target phase and corrects for that motion.

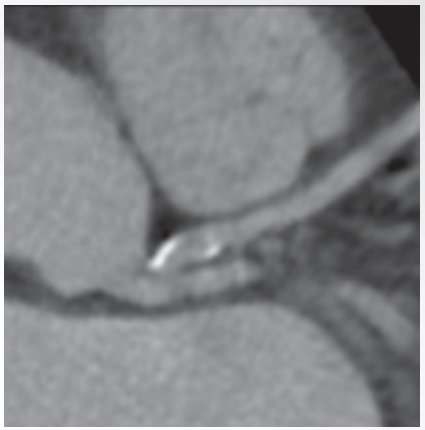
Because SnapShot Freeze corrects motion within a single heart cycle, it is not susceptible to beat-to-beat inconsistencies, which can make multi-sector (i.e., multi-heart cycle) reconstruction less effective.



Heart Rate Variation 56 to 94 bpm



Without SnapShot Freeze



With SnapShot Freeze

SNAPSHOT* PULSE—UP TO 83% DOSE REDUCTION.

SnapShot Pulse mode enables low-dose imaging of the coronary arteries and structures that are near the heart and may be affected by heart motion, such as thoracic aortas or pulmonary arteries. Prospective gating-based SnapShot Pulse can achieve up to 83% dose reduction compared to an ECG-gated helical acquisition mode.

Workflow enhancement with SnapShot Assist

Ready
Start timing bolus or practice breath hold

Set
System suggests type, pitch thickness, interval

✓Scan

ALWAYS KEEP AN EYE ON THE ECG WAVEFORM.
You visualize the ECG waveform directly on the ECG monitor, twelve-inch Xtream gantry display, and the CT scanner console, allowing you to easily review the patient heart rate during cardiac scanning.

ENHANCE WORKFLOW WITH SNAPSHOT* ASSIST
FREEdom Edition SnapShot Assist combines information about patient heart rate variability and BMI to guide you to optimal cardiac scan settings. These displayed settings are based on over a decade of GE experience in cardiac CT and can be updated as desired to match your department's best practices scan protocols.

Emergency: When seconds count

With the Optima CT660 FREEdom Edition, you set up ED exams quickly and patients can be scanned in seconds. The optimized ergonomics allow you to set-up the exam without leaving the patient's side, which is reassuring to patients.

NEW ED EXAM WORKFLOW

Using the One-Stop ED scanning mode, you set up ED exams on the GE-exclusive Xtream gantry display without leaving the patient's side. Ten prospectively user defined reconstructions let you quickly assess trauma patients with multiple injuries to determine the extent of those injuries.

REVIEW YOUR IMAGES IN REAL-TIME

Using Image Check real-time reconstruction (55 fps), the acquired images appear quickly on the CT console, enabling a quick diagnosis and improving triage and door-to-door treatment times in emergency radiology.

Focus less on the system and more on your patients

XTREAM DISPLAY
The Xtream display prominently shows the patient name, making exams more personal. It also includes a number of educational videos that explain CT procedures or can be used as a distraction technique for younger patients.

ONE-STEP POSITIONING
The table provides automatic One-Step positioning, reducing manual positioning and streamlining workflow.

USER-FRIENDLY CONSOLE
The Optima CT660 FREEdom Edition workspace provides flexibility and comfort, whether you're sitting or standing. The graphical user interface, common to all GE CT systems, puts automated processing at your fingertips.

SYNCHRONIZED INJECTION
Xtream Injector provides a synchronized start of the scan and injection from the CT operator console. Synchronization provides increased opportunity for successful contrast bolus timing and consistency of user-entered parameters, potentially reducing the opportunity for error.

PERSONALIZED TOUCHES
One-touch set-ups allow you to personalize image presentation to individual physician preferences in advanced processing, volume-rendering attributes, multi-planar reformats and image sizing.

Giving you profound image clarity at lower dose

Without ASiR

With ASiR

Traditionally in CT there has been an undesirable trade-off between image performance and low radiation dose levels. While high image performance often requires greater patient exposure to diagnostic radiation, lower dose levels usually mean lower image clarity due to higher noise and more artifacts.

GE Healthcare has taken steps toward eliminating this trade-off by developing parallel technologies to reduce the dose while maintaining diagnostic image quality.

ASiR* may help you achieve dose reductions while delivering the diagnostic image quality needed for confident diagnosis.[1] It may also improve low-contrast detectability. ASiR, a projection-based iterative reconstruction technology, changes the dose paradigm across many anatomies and patients. Customers using ASiR have demonstrated excellent diagnostic image quality at low dose across exam types and body regions.

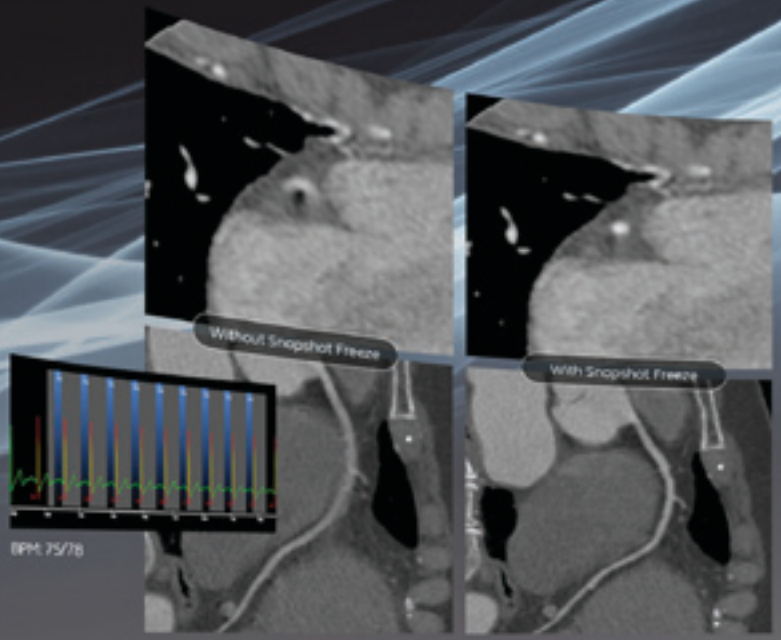
OPTIDOSE

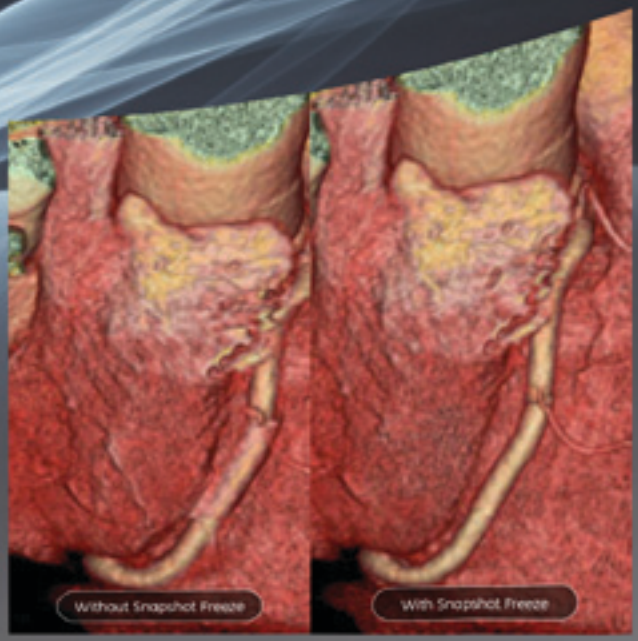
Dose reduction with ASiR is combined with GE Healthcare's proven Optidose technologies that deliver dose reduction at the source. Optidose offers SmartTrack dynamic collimation that keeps the X-ray beam tightly focused on the active detector cells and Dynamic Z-Axis tracking, which blocks unused X-rays at the beginning and end of a helical scan.

DOSE CHECK

Prior to starting the scan while setting the scan parameters, Dose Check provides tools to notify and alert you whether the estimated dose index is above user-defined notification values. The Dose Check feature is designed to comply with the NEMA XR-25-2010 standard.

[1]In clinical practice, the use of ASiR may reduce CT patient dose depending on the clinical task, patient size, anatomical location, and clinical practice. A consultation with a radiologist and a physicist should be made to determine the appropriate dose to obtain diagnostic image quality for the particular clinical task.


Without Snapshot Freeze
With Snapshot Freeze
BPM: 75/78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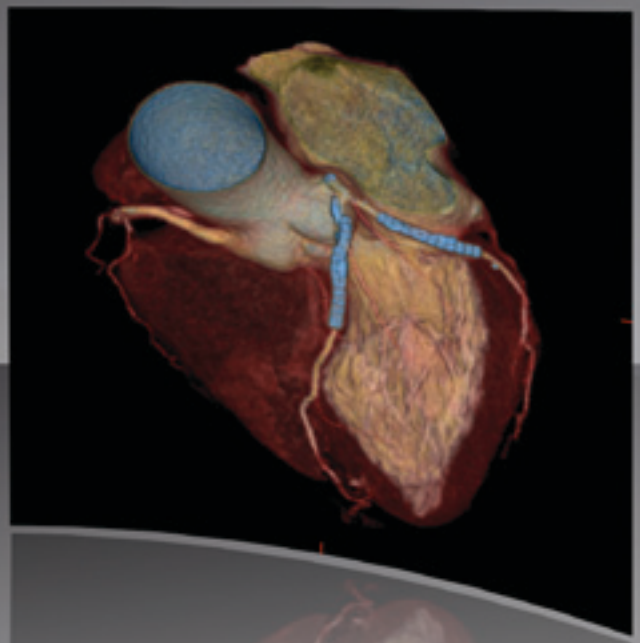
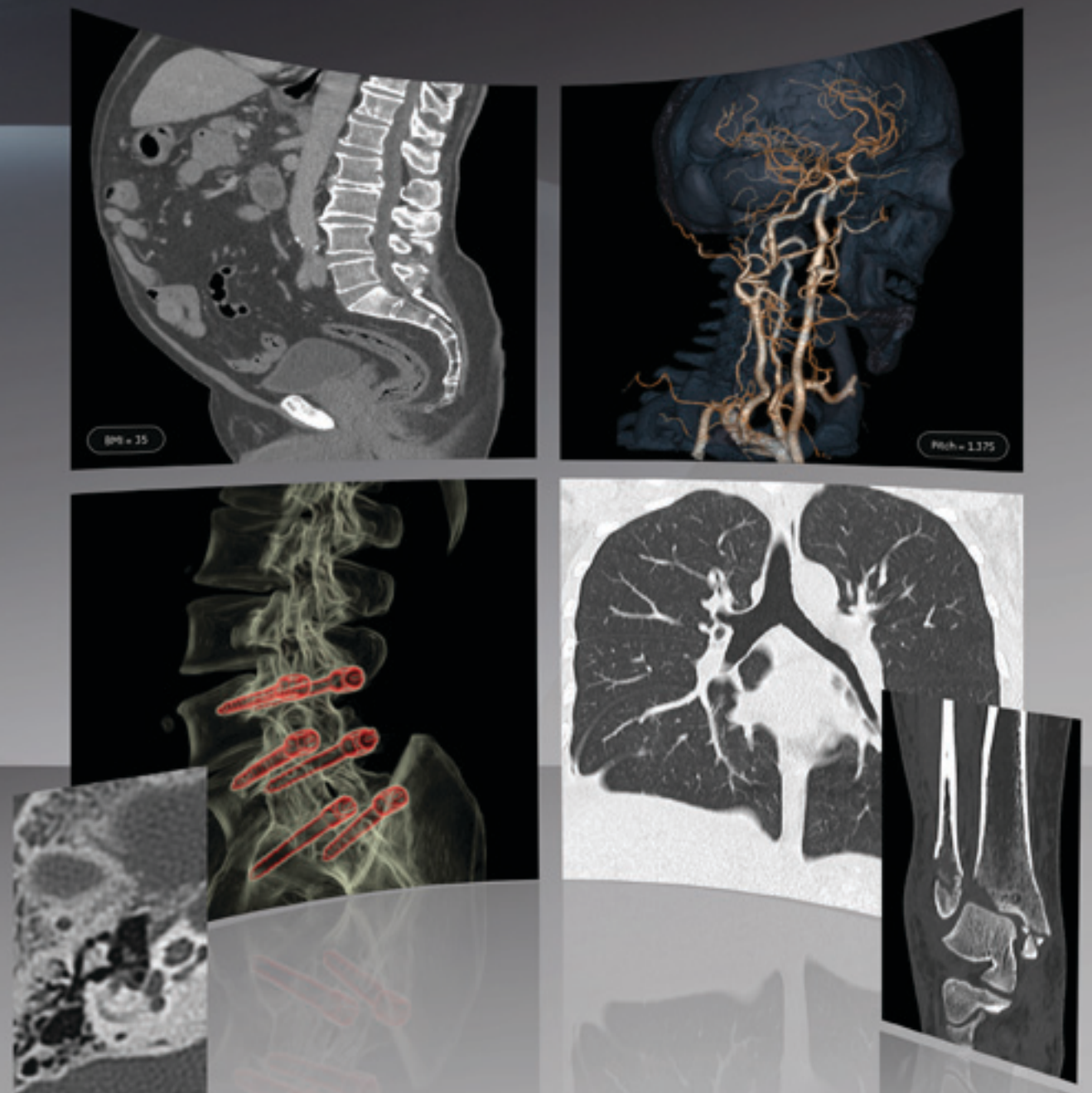
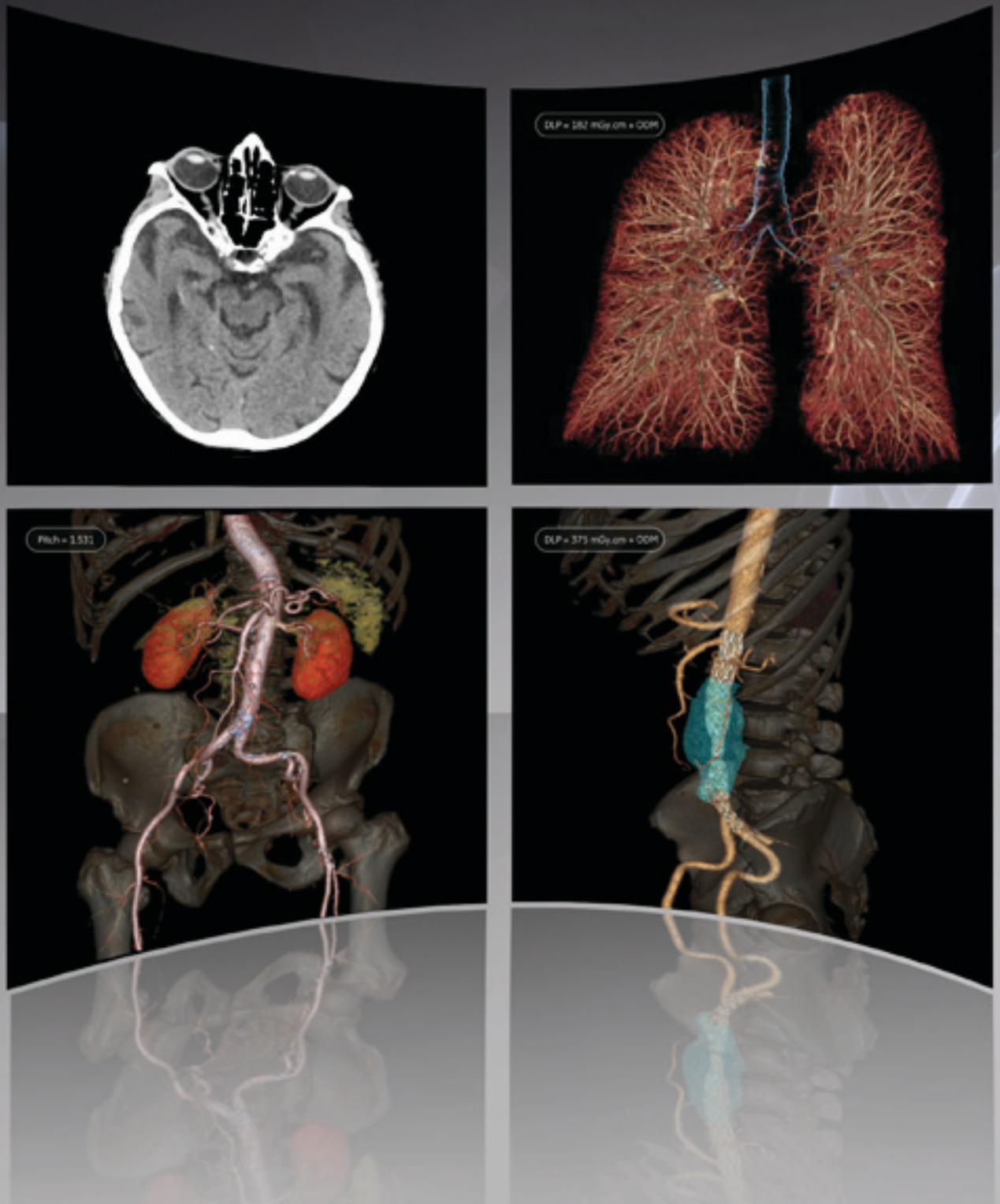


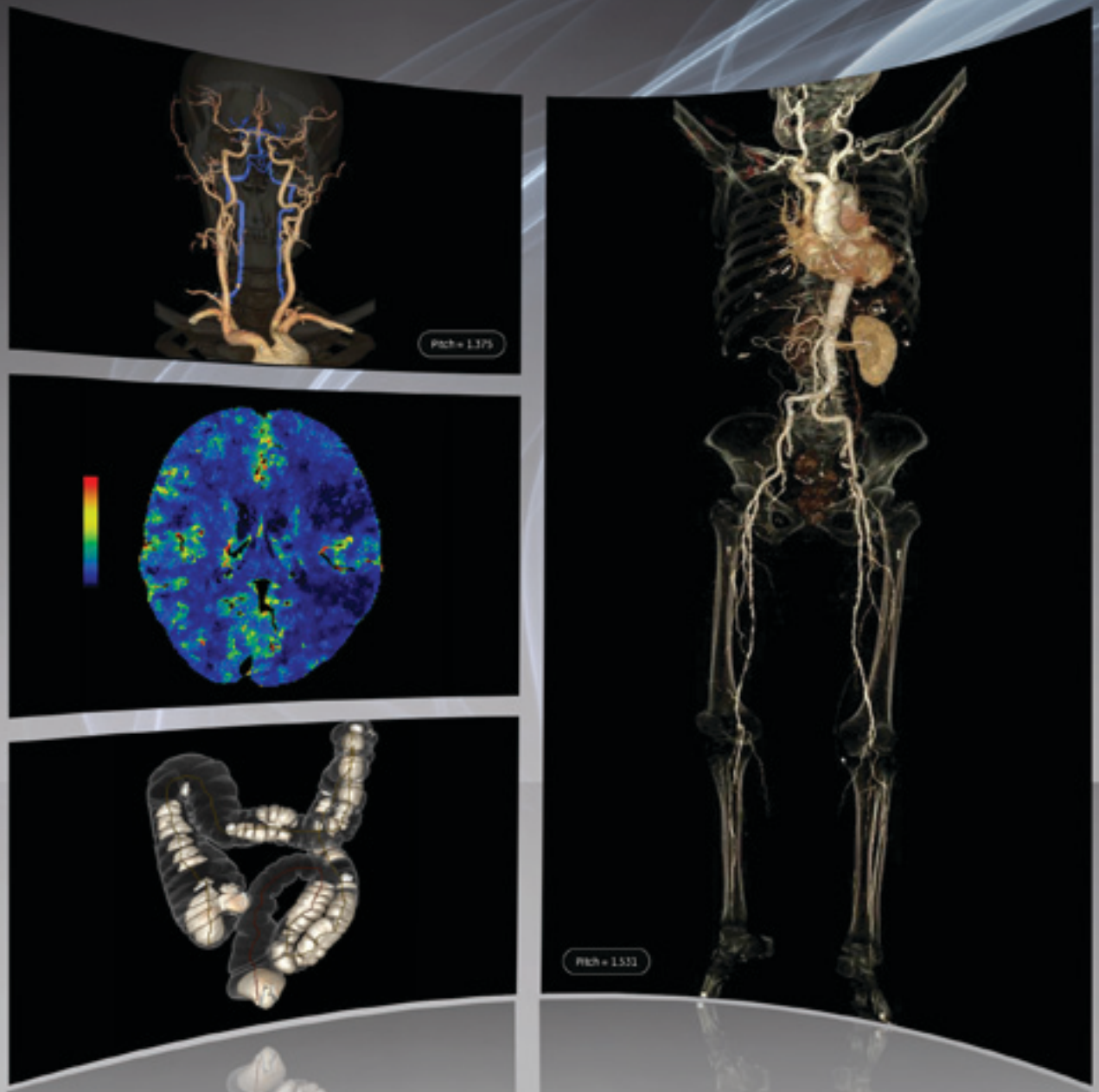
Cardiac



Spatial resolution



Dose



Acquisition speed

Power and performance, even for demanding cases

Without IQE

With IQE

With the Optima CT660 FREEdom Edition, you can image small structures and see fine details, or examine large patients without compromising imaging quality and speed. With a strong combination of a reliable X-ray tube and a powerful 72 kW generator delivering a peak of up to 600 mA, you can rely on the system to scan patients even in the most demanding situations.

SPEED AND COVERAGE

For dynamic acquisition studies like pulmonary embolism, thorax, and vascular, as well as for pediatrics and uncooperative patients, it is critical to acquire thin slices at the high table speed in z-direction.

GE helical reconstruction technologies and crossbeam correction work together to enable fast routine scanning of up to 70 cm in 7 seconds while delivering 0.35-mm isotropic spatial resolution.

AN INNOVATIVE DETECTOR DEVELOPED FOR HIGH SPATIAL AND TEMPORAL RESOLUTION

The V-Res detector and Volara DAS are optimized for thin-slice, volumetric imaging with high spatial and temporal resolution. Their design and GE's patented HiLight* material composition combine to satisfy the critical-to-quality requirements for primary speed, afterglow, X-ray stopping power, transparency, light-to-electronic signal conversion, z-axis uniformity, and robust performance.

These exceptional capabilities enable the Optima CT660 FREEdom Edition scanner to uniformly and routinely achieve excellent imaging performance in a wide array of clinical applications including cardiac.

Optima CT660 FREEdom Edition: A partner of choice for your most critical studies

ADVANCED TECHNOLOGY FOR DYNAMIC PERFUSION STUDIES: TWICE THE COVERAGE WITH LESS DOSE[1]

The Optima CT660 allows extended coverage of up to 120 mm with Volume Helical Shuttle or 80 mm with VolumeShuttle[1], providing more neuro perfusion coverage. Perfusion 4D takes simplicity and intelligence to a new level and supports quick analysis of CT perfusion images obtained by cine imaging.

ANGIOGRAPHY: EXTENDED RANGE FOR DYNAMIC CTA AND FUNCTIONAL ASSESSMENT

The Optima CT660 speed and coverage may allow you to capture the arterial phase for assessment of most vascular segments. Autolaunch and preprocessing offer substantial time savings, by preparing up to eight cases for reading. In addition, Autobone automatically subtracts bones in angiography studies and features automatic vessel tracking and thrombus segmentation.

ONCOLOGY: DETECT, CHARACTERIZE, AND QUANTIFY LESIONS

The thin slices of the Optima CT660 provide extreme image clarity for detecting very small lesions. GE Healthcare's AW oncology capabilities help streamline time-consuming oncology follow-up studies with integrated reading tools.

Lung VCAR offers a more productive reading workflow solution with automatic processing, enabling fast second reviews and easy comparison of follow-up studies.

Colon VCAR enables the detection of colonic lesions with electronic cleansing. The software allows you to primary-read and problem solve using correlated 2D, 3D, or 360-degree dissection views.

Oncology follow-up studies represent over 70% of routine reviews. Oncoquant* imaging software automates workflow from your PACS, facilitating easy comparisons over time and efficient follow-up exams. So you spend more time reading and reviewing, with less time retrieving studies and preparing exams.

[1]Less dose due to X-ray beam being turned off during table moves.

Powered by AW

Beyond post-processing image efficiency, a comprehensive solution is available to empower your Optima CT660 FREEdom Edition experience.

CLINICAL RELEVANCE IS THE MAIN DRIVER OF GE HEALTHCARE'S POST-PROCESSING SOFTWARE

Since 1990, improvements in the company's offering have led to a robust and constantly enriched foundation coming directly from the modality's latest innovations. Today it provides a unique and consistent multimodality 2D, 3D, and 4D environment, placing patient pathology in the center. On top of this foundation is GE Healthcare's large portfolio of vascular, cardiac, oncology, and neurology advanced applications that enhance scanner capacities to provide accurate assessments.

CLINICAL RELEVANCE WITHOUT SYSTEM INTEROPERABILITY MEANS NOTHING

With significant dose reduction, CT scanners increase body exploration capacities. Additionally, the volume of data is growing fast and managing it becomes time-consuming and complex. That is why AW ensures deep integration with medical equipment—CT, MRI, PET-CT, Vascular—and your RIS and PACS systems. Because communication alone is not enough, AW provides Workflow Booster, an automatic case preparation and preprocessing tool.

UNLEASH THE POWER AND ACCESS IT FROM ANYWHERE

Complex pathologies require teamwork and expertise sharing inside or outside of your facility. GE Healthcare's client server model, AW Server, complements the traditional AW workstations, offering a centrally managed, post-processing engine accessible from any PC or Mac[1], staff meeting, radiologist office, or outside if allowed[2].

[1]Following systems are supported: Windows® XP, Vista & Windows 7, AW Workstations, Mac® (using Windows Parallel).

[2]IT team needs to configure appropriate access to server from outside the facility.

About GE Healthcare

GE Healthcare provides transformational medical technologies and services that are shaping a new age of patient care. Our broad expertise in medical imaging and information technologies, medical diagnostics, patient monitoring systems, drug discovery, biopharmaceutical manufacturing technologies, performance improvement and performance solutions services helps our customers to deliver better care to more people around the world at a lower cost. In addition, we partner with healthcare leaders, striving to leverage the global policy change necessary to implement a successful shift to sustainable healthcare systems.

Our "healthymagination" vision for the future invites the world to join us on our journey as we continuously develop innovations focused on reducing costs, increasing access, and improving quality around the world. Headquartered in the United Kingdom, GE Healthcare is a unit of General Electric Company (NYSE: GE). Worldwide, GE Healthcare employees are committed to serving healthcare professionals and their patients in more than 100 countries. For more information about GE Healthcare, visit our website at www.gehealthcare.com.

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imagination at work

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